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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,672	08/19/2003	Ajoy K. Ray	ITL.0996US (P14028)	5759

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TROP PRUNER & HU, PC
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HOUSTON, TX 77057-2631

EXAMINER

CHAWAN, SHEELA C

ART UNIT	PAPER NUMBER
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2624

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/28/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/643,672

Applicant(s)

RAY ET AL.

Examiner

Sheela C. Chawan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-9 and 20-24 is/are allowed.
- 6) ☒ Claim(s) 10-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 August 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>1/20/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. Information Disclosure Statement submitted on 1/20/04 has been considered by the examiner.

Drawings

2. Drawings filed 8/20/03 have been approved by the examiner.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 10-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eraslan (US 6381346 B1) in view of Tolga et al. (Indexing large metric spaces for similarity search queries----IDS).

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As to claims 10 and 16, Eraslan discloses a method comprising:

obtaining feature set information from a first view of a human face and a second view of the human face (column 1, lines 33-38; column 5 line 66 to column 6 line 28; column 9, lines 18-34);

storing the feature set information in a database (column 5 line 66 to column 6 line 28; column 9, lines 18-34).

Eraslan does not clearly disclose database having a hierarchical tree structure as claimed. However, Tolga et al. discloses an indexing large metric spaces for similarity search queries including database having a hierarchical tree structure (see abstract). Both references are combinable because they both deal in solving the similar problem of searching similarity between individuals. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Eraslan by including the database having a hierarchical tree structure as taught by Tolga et al. Because such a modification will solve the problem of answering similarity based queries efficiently for high-dimensional metric spaces as mentioned by Tolga et al. at page, paragraph 4.

As to claim 11, Eraslan disclose the method, wherein the database includes feature set information for a plurality of individuals (column 5 line 66 to column 6 line 28; column 9, lines 18-34).

As to claims 12 and 17, Tolga et al. disclose the method of claim 10, further comprising determining whether to store the feature set information in a first branch or a

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second branch of the hierarchical tree structure based upon a value in the feature set information (at least abstract).

As to 13, Tolga et al. disclose the method wherein the value corresponds to a metric distance function (abstract; title).

As to claims 14 and 18, Tolga et al. disclose the method, further comprising searching the database for at least one search result corresponding to a query image (abstract).

As to claims 15 and 19, Tolga et al. disclose the method, further comprising searching the first branch or the second branch for a search result corresponding to a query image based on a metric distance function of the query image Abstract).

Allowable Subject Matter

4. The following is a statement of reasons for the indication of allowable subject matter:

Claims 1-9 and 20-24 are allowed.

The prior art on record fails to teach or suggest, alone or in combination, marking a first set of fiducially points on the first view and a second set of fiducially points on the second view as recited in claims 1 and 20.

Other prior art cited

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Shackleton et al. (US 5,719,951) disclose a normalized image feature processing.

Baluja et al. (US 6,128,397) disclose a method for finding all frontal faces in arbitrarily complex visual scenes.

Prokoski (US 6,751,340 B2) discloses a method and apparatus for aligning and comparing images of the face and body from different imagers.

Maurer et al. (US 6,272,231 B1) disclose a wavelet-based facial motion capture for avatar animation.

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Contact Information

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheela C Chawan whose telephone number is. 571-272-7446. The examiner can normally be reached on Monday - Thursday 7.30 - 6.00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella reached on 571-272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sheela Chawan
Patent Examiner
Group Art Unit 2624
Dec 21, 2006


SHEELA CHAWAN
PRIMARY EXAMINER